

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

In the claims

1. - 122. (Canceled)

123. (Currently Amended): A device for managing respiration of a patient having a sleep breathing disorder comprising:

at least one electrode in electrical communication with a diaphragm or phrenic nerve tissue of a patient's body configured to sense respiration;

a stimulator control unit in electrical communication with the at least one electrode and whereby the stimulator control unit receives sensed respiration activity,

wherein the stimulator control unit is programmed to identify the intrinsic breathing cycle of the patient and create an intrinsic baseline profile thereof;

wherein the stimulator control unit is further programmed to generate an electrical stimulation signal in response to the sensed respiration and deliver the electrical stimulation signal through the at least of said one electrode electrodes to the diaphragm or phrenic nerve tissue, wherein said stimulator control unit is configured programmed to deliver an electrical stimulation signal comprising a burst or series of pulses during inspiration to adjust the breathing cycle of said patient,

wherein the stimulator control unit is further programmed to monitor the adjusted breathing cycle of the patient, compare it against the patient's baseline intrinsic level and when the breathing is not at a desired level, to then adjust one or more parameters of the electrical stimulation signal and provide stimulation with each breath to incrementally adjust until the breathing cycle is further adjusted to reach the desired level, and

wherein the electrical stimulation signal is configured to elicit a diaphragm response by stimulating to increase an inspiration duration which supplements a breath.

124. – 125. (Canceled)

126. (Currently Amended): A device for managing respiration of a patient comprising:

at least one electrode in electrical communication with a diaphragm or phrenic nerve tissue of a patient's body, wherein at least one of said electrodes is configured to sense respiration;

a stimulator control unit in electrical communication with the at least one electrode whereby the stimulator control unit receives respiration activity sensed by at least one electrode,

wherein the stimulator control unit is programmed to generate an electrical stimulation signal in response to the sensed respiration and deliver the electrical stimulation signal through the at least one electrode to the diaphragm or phrenic nerve tissue, wherein said stimulator control unit is configured programmed to deliver the electrical stimulation signal as a burst or series of pulses during inspiration to adjust the breathing cycle of said patient,

wherein the stimulator control unit is further programmed to monitor the adjusted breathing cycle of the patient and compare against the patient's intrinsic level and to then adjust one or more parameters of the electrical stimulation signal to incrementally adjust with each breath until the breathing cycle is further adjusted to reach a desired level, and

wherein the electrical stimulation signal is configured to elicit a diaphragm response by stimulating to supplement an inspiration volume of a breath.

127. – 140. (Canceled)

141. (Currently Amended): The device of claim 123 or 126 wherein the stimulator control unit is further programmed to elicit an inspiration rate different from an intrinsic inspiration rate.

142. – 148. (Canceled)

149. (Currently Amended): The device of claim 123 wherein the stimulator control unit is programmed to deliver a stimulation signal to the tissue through the at least one electrode to elicit a slow elongated inspiration.

150. (Currently Amended): The device of claim 123 wherein the stimulator control unit is programmed to deliver a stimulation signal to the tissue through the at least one electrode to elicit a fast, short inspiration.

151. (Currently Amended): The device of claim 123 or 126 wherein the stimulator control unit is further programmed to deliver low level sequential stimulations.

152. (Currently Amended): The device of claim 123 or 126 wherein the stimulator control unit is configured to deliver a stimulation signal that is directed to manipulating blood gases to thereby treat disordered breathing.

153.-158. (Canceled)

159. (Currently Amended): The device of claim 123 or 126 wherein said stimulator control unit is further programmed so that when the breathing has reached the desired level, the stimulation signal is no longer delivered.

160. (Canceled).